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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,023	09/18/2003	Pierre Labelle	03119P	9120

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EXAMINER	
ALEXANDER, MICHAEL P	
ART UNIT	**PAPER NUMBER**
1742	

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/667,023	LABELLE ET AL.	
	Examiner	Art Unit	
	Michael P. Alexander	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *30 December 2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronfin et al (US 2003/0086811 A1) in view of Norville et al. (US 6,845,809 B1).

Regarding claims 1-4, Bronfin et al. teach (0010, 0012 and Example1) a magnesium-based, semi-solid casting alloy inherently having improved elevated temperature performance when cast from a semi-solid alloy slurry, the alloy comprising, in weight percent, 4.8% aluminum, 1.35% strontium, with the balance being magnesium, except for impurities commonly found in magnesium alloys.

Still regarding claims 1-4, Bronfin et al. teach (0012) that the alloy can be used in semi-solid casting but does not specify that the semi-solid alloy slurry would include up to about 20% of a solid fraction by weight. However, Norville et al. teach (col. 19 lines

11-40) that the solid fraction percentage determines the viscosity of the alloy. Since solid fraction percentage is a result-effective variable as taught by Norville et al., it would have been obvious to one of ordinary skill in the art to select the desired solid fraction percentage in the alloy of Bronfin et al. as a routine optimization. See MPEP 2144.05 II.

Regarding claims 5-6, Bronfin et al. do not specify that the alloy would have the claimed properties. However, the alloy of Bronfin et al. would inherently have the claimed properties because it has the claimed composition.

Regarding claims 7-10, Bronfin et al. teach (0010, 0012 and Example1) a magnesium-based, semi-solid casting alloy inherently having improved elevated temperature performance when cast from a semi-solid alloy slurry, the alloy comprising, in weight percent, 4.8% aluminum, 1.35% strontium, with the balance being magnesium, except for impurities commonly found in magnesium alloys.

Still regarding claims 7-10, Bronfin et al. teach (0012) that the alloy can be used in semi-solid casting but does not specify that the semi-solid alloy slurry would include up to about 5% of a solid fraction by weight. However, Norville et al. teach (col. 19 lines 11-40) that the solid fraction percentage determines the viscosity of the alloy. Since solid fraction percentage is a result-effective variable as taught by Norville et al., it would have been obvious to one of ordinary skill in the art to select the desired solid fraction percentage in the alloy of Bronfin et al. as a routine optimization. See MPEP 2144.05 II.

Regarding claims 11-12, Bronfin et al. do not specify that the alloy would have the claimed properties. However, the alloy of Bronfin et al. would inherently have the claimed properties because it has the claimed composition.

Regarding claims 13-14, Bronfin et al. teach (0012) that the casting would be cast using a thixotropic casting process.

Regarding claims 15-16, Bronfin et al. do not specify that the alloy would have the claimed microstructure. However, the alloy of Bronfin et al. would inherently have the same microstructure because it has the claimed composition.

Regarding claims 17-20, Bronfin et al. teach (0010, 0012 and Example1) a magnesium-based casting inherently having improved elevated temperature performance when cast from a semi-solid alloy slurry, the alloy comprising, in weight percent, 4.8% aluminum, 1.35% strontium, with the balance being magnesium, except for impurities commonly found in magnesium alloys. Bronfin et al. teach (0012) that the alloy can be used in semi-solid casting, during which the alloy would be in the form of a slurry.

Still regarding claims 17-20, Bronfin et al. teach (0012) that the alloy can be used in semi-solid casting but does not specify that the semi-solid alloy slurry would include up to about 20% of a solid fraction by weight. However, Norville et al. teach (col. 19 lines 11-40) that the solid fraction percentage determines the viscosity of the alloy. Since solid fraction percentage is a result-effective variable as taught by Norville et al., it would have been obvious to one of ordinary skill in the art to select the desired solid

fraction percentage in the alloy of Bronfin et al. as a routine optimization. See MPEP 2144.05 II.

Regarding claims 21-22, Bronfin et al. do not specify that the alloy would have the claimed properties. However, the alloy of Bronfin et al. would inherently have the claimed properties because it has the claimed composition.

Regarding claims 23-26, Bronfin et al. teach (0010, 0012 and Example1) a magnesium-based casting inherently having improved elevated temperature performance when cast from a semi-solid alloy slurry, the alloy comprising, in weight percent, 4.8% aluminum, 1.35% strontium, with the balance being magnesium, except for impurities commonly found in magnesium alloys. Bronfin et al. teach (0012) that the alloy can be used in semi-solid casting, during which the alloy would be in the form of a slurry.

Still regarding claims 23-26, Bronfin et al. teach (0012) that the alloy can be used in semi-solid casting but does not specify that the semi-solid alloy slurry would include up to about 5% of a solid fraction by weight. However, Norville et al. teach (col. 19 lines 11-40) that the solid fraction percentage determines the viscosity of the alloy. Since solid fraction percentage is a result-effective variable as taught by Norville et al., it would have been obvious to one of ordinary skill in the art to select the desired solid fraction percentage in the alloy of Bronfin et al. as a routine optimization. See MPEP 2144.05 II.

Regarding claims 27-28, Bronfin et al. do not specify that the alloy would have the claimed properties. However, the alloy of Bronfin et al. would inherently have the claimed properties because it has the claimed composition.

Regarding claims 29-30, Bronfin et al. teach (0012) that the casting would be cast using a thixotropic casting process.

Regarding claims 31-32, Bronfin et al. do not specify that the alloy would have the claimed microstructure. However, the alloy of Bronfin et al. would inherently have the same microstructure because it has the claimed composition.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Alexander whose telephone number is 571-272-8558. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

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